

**MARYLAND HISTORICAL TRUST
DETERMINATION OF ELIGIBILITY FORM**

NR Eligible: yes ☐ no ☒

Property Name: SHA Bridge 0303400, US 40 Little Gunpowder Falls Inventory Number: BA-2665
Address: Pulaski Highway (US 40) New Philadelphia Road Historic district: ☐ yes ☒ no
City: Joppatown Zip Code: 21085 County: Baltimore County
USGS Quadrangle(s): ~~Bel Air~~ EDGEWOOD
Property Owner: State Highway Administration Tax Account ID Number: _____
Tax Map Parcel Number(s): _____ Tax Map Number: _____
Project: Reevaluation of Highway Bridges Statewide Agency: FHWA/MD SHA
Agency Prepared By: KCI Technologies, Inc.
Preparer's Name: Alison Ross Date Prepared: 10/16/2009
Documentation is presented in: Project Review and Compliance Files
Preparer's Eligibility Recommendation: ☐ Eligibility recommended ☒ Eligibility not recommended
Criteria: ☐ A ☐ B ☐ C ☐ D Considerations: ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F ☐ G
Complete if the property is a contributing or non-contributing resource to a NR district/property
Name of the District/Property: _____
Inventory Number: _____ Eligible: ☐ yes Listed: ☐ yes
Site visit by MHT Staff ☐ yes ☒ no Name: _____ Date: _____

Description of Property and Justification: *(Please attach map and photo)*

Bridge No. 0303403 (MIHP No. BA-2665) is a dualized bridge, with each bridge being a 2-lane, 2-span concrete beam bridge that carries US 40 over Little Gunpowder Falls in southeastern Baltimore County. The bridge consists of concrete abutments and a concrete pier supporting the beams. The area immediately surrounding the bridge is wooded, with nearby sections having mixed residential and commercial development. The 2006 Average Daily Traffic (ADT) count is 14,160 and the 2026 ADT is 16,326. The bridge's function class is an Urban Other Principal Arterial.

Background

The first evaluation of SHA Bridge No. 0303403 was completed in 1995, for which a Maryland Inventory of Historic Properties (MIHP) form was completed. The Interagency Historic Highway Bridge Inventory Committee (HHBIC) considered the MIHP form in 1996 and subsequently determined Bridge No. 0303400 to be eligible for listing in the National Register of Historic Places (NRHP). The bridge was determined eligible under NRHP Criterion A for its association with the New Philadelphia Road built by the State Roads Commission and Criterion C as a significant example of the State Roads Commission's bridge building using its 1933 standard specifications. The MIHP form also stated that the bridge retains a fair degree of integrity of its character-defining

MARYLAND HISTORICAL TRUST REVIEW

Eligibility recommended ☐ Eligibility not recommended ☒
Criteria: ☐ A ☐ B ☐ C ☐ D Considerations: ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F ☐ G

MHT Comments:

lost integrity

Jim Salunke
Reviewer, Office of Preservation Services

PKintz
Reviewer, National Register Program

5/14/10
Date

5/18/10
Date

201001192

elements (CDEs). The Maryland Historical Trust (MHT) concurred with the determination in 2001.

SHA Bridge No. 0303403 was re-evaluated for NRHP eligibility as part of the 2009 statewide re-evaluation of the eligible bridges in SHA's Historic Highway Bridge Inventory. SHA requested that KCI conduct research to gather information and provide additional analysis of each of the bridge's integrity and significance to supplement the original NRHP evaluation. As part of the re-evaluation, a KCI historian conducted research at SHA's Office of Structures (OOS) to gather additional information on the bridge, including alterations and repairs that have been made to the structure between the years of 1995 to 1998. The following documents were reviewed by the KCI architectural historian: inspection files, repair history files, bridge plans, the Bridge Inspection and Remedial Engineering (BIRE) Worklist, and the Structure Inventory and Appraisal (SI&A) reports. A KCI architectural historian visited the bridge to examine and document current conditions with field notes, digital photography, and black and white photography. In order to re-evaluate the bridge's historic significance and NRHP eligibility, the following documents were used: the original MIHP form, Historic Highway Bridges in Maryland: 1631-1960: Historic Context Report and A Context for Common Historic Bridge Types, NCHRP Project 25-25, Task 15.

Evaluation and Justification

During the re-evaluation, the research into SHA records has shown that SHA Bridge No. 0303403 is in fair condition. Research and field survey have shown that, while the bridge retains all of the CDEs, its integrity has been compromised through loss of material on the CDEs. This evaluation will discuss the eastbound portion of the dualized bridge first, followed by a discussion of the westbound bridge.

Eastbound Bridge

The Bridge Sufficiency Rating (BSR) is 62. The current condition rating for the superstructure is 5. Field survey has shown that the superstructure's girders have exhibited deterioration. The bottom of the exterior concrete encased girders has been patched with gunite and has cracks with efflorescence and patched areas. Both exterior girders have heavy scaling and deterioration full height on both sides of the girder at the joint over the pier. Several ends of rebar are exposed as well. Scattered small spots of spall were apparent on the bottom of the girders and deck, and numerous patched areas were visible on the underside of the deck and beams. A large area of exposed rusted rebar was visible on the bottom of a girder on the eastern bay.

Field survey has shown that the parapets of the eastbound bridge exhibit areas of deterioration. Many balusters are either patched or spalled and have rebar exposed. The curbs also have random areas of spalling with exposed rebar. The northern parapet has had traffic damage, and a long section of cap is missing. The southern wall has a loose cap section and missing balusters. The northern parapet wall has 1 damaged section with missing balusters and exposed rusted rebar. Most of the curb is spalled at the base of the parapet wall. Two sections of the southern side of the parapet have deteriorated and have missing balusters and exposed rusted rebar. The exterior face of the southern parapet has spalled concrete on the exterior curbs and efflorescence along the fascia. No major problems were visible on the wingwalls.

The current condition rating for the deck is 4, indicating deterioration of this element. The deck has exhibited some deterioration since the last evaluation was completed, and periodic repairs have had to be made.

Westbound bridge

The Bridge Sufficiency Rating (BSR) is 62 for the westbound bridge as well. The current condition rating for the deck is 4. The

MARYLAND HISTORICAL TRUST REVIEW

Eligibility recommended _____ Eligibility not recommended _____

Criteria: ____A ____B ____C ____D Considerations: ____A ____B ____C ____D ____E ____F ____G

MHT Comments:

Reviewer, Office of Preservation Services

Date

Reviewer, National Register Program

Date

deck has had similar problems to the eastbound bridge because of deterioration of the concrete.

The current condition rating for the superstructure is 5. The superstructure has had similar problems with the girders as with the eastbound bridge. During field survey it was observed that all of the girders had been patched on the bottom faces, and many were patched on the sides as well.

The parapets exhibited deterioration as well. Several balusters have been patched and are failing, while some balusters are completely missing. The curbs have been patched in places, and the caps were moderately scaled throughout. Guardrails have been installed the full length of the both sides of the bridge. During a vehicular accident a vehicle hit the southern parapet, and a section of the cap was knocked into the stream. The balusters are missing from this section of parapet. The remaining southern parapet is severely scaled. On the northern parapet wall, 3 sections have missing balusters and exposed rusted rebar, and other sections have heavily spalled balusters. The exterior faces of the walls are spalled and scaled on the exterior curb and fascia.

The current condition rating for the substructure is 6. Field survey has confirmed that the wingwalls exhibit a spall on the northwestern wingwall and a spall on the southwestern wingwall near the joint with the abutment. The pier nose has a metal angle on the northern end that is in good condition but has rusted.

The 2009 reevaluation has found that while the bridge retains all of its character defining elements (CDEs), the elements have been compromised through loss of material in sections of the element, such as the parapet. Its integrity of design, materials, workmanship, and feeling has been compromised as a result. The integrity of setting, location, and association of the bridge has not changed and remain good. The overall feeling of the bridge is poor due to the deteriorated condition of the structure.

This re-evaluation disagrees with the 1995 evaluation and recommends that SHA Bridge No. 0303403 is not eligible for listing in the NRHP. Its association with the New Philadelphia Road built by the State Roads Commission is not strong enough for it to be eligible for NRHP-listing under Criterion A. There is no known association with any known person of local, regional, or national significance (Criterion B). In addition the structure is not an important example of a dualized concrete beam bridge of its time period. It was constructed from standardized bridge plans to help meet the transportation demands of its time and is not NRHP-eligible under Criterion C. Based on this evaluation, Bridge No. 0303403 is recommended not eligible for inclusion in the NRHP under Criterion C. Criterion D was not evaluated as part of the historic standing structures studies for this project.

MARYLAND HISTORICAL TRUST REVIEW

Eligibility recommended _____ Eligibility not recommended _____

Criteria: ___A ___B ___C ___D Considerations: ___A ___B ___C ___D ___E ___F ___G

MHT Comments:

Reviewer, Office of Preservation Services_____
Date_____
Reviewer, National Register Program_____
Date

MIHP No. BA-2665
SHA Bridge No. 0303400
US 40 over Little Gunpowder Falls
Baltimore County, Maryland

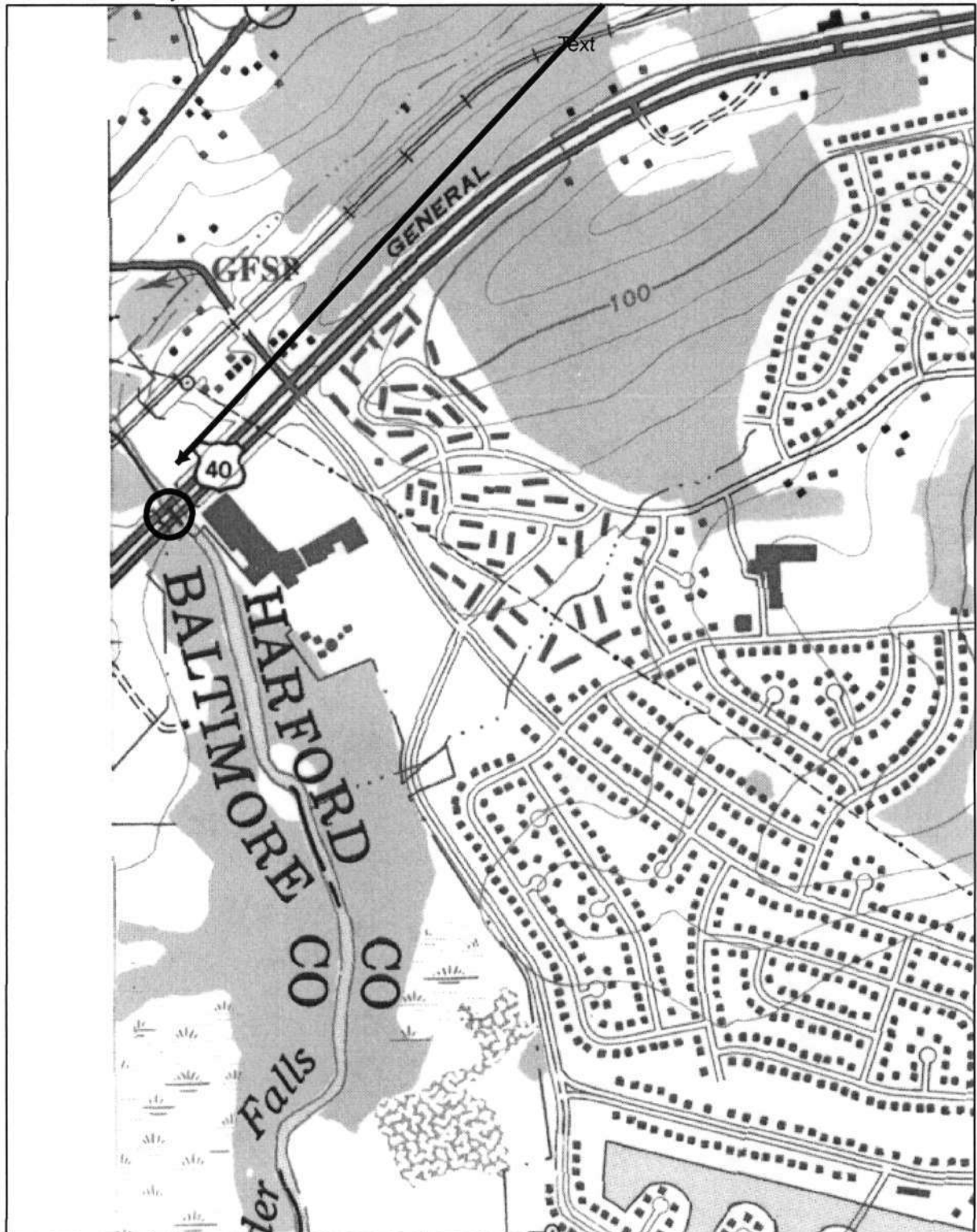
Photograph Log

Image File Name	Description of View
BA-2665_2009-02-06_01.tif	Northwestern elevation, facing southeast
BA-2665_2009-02-06_02.tif	Exterior of southeastern parapet on westbound bridge, showing damaged and missing parapet and cracking and efflorescence on fascia, facing northwest
BA-2665_2009-02-06_03.tif	Southeastern elevation, facing southeast
BA-2665_2009-02-06_04.tif	Southwestern wingwall and continuous abutment, showing spalled concrete curb and fascia and cracked wingwall, facing south
BA-2665_2009-02-06_05.tif	Exposed rebar on underside of girder, facing northeast (eastbound bridge)
BA-2665_2009-02-06_06.tif	Area between eastbound and westbound bridges, facing east

Printed on Epson Premium Photo Paper Glossy with Epson UltraChrome Black Ink

Saved on Verbatim UltraLife Archival Grade DVD-R, AZO recording dye

BA-2665
SHA Bridge 0303400
HWY 40 over Little Gunpowder Falls
Joppatown
Edgewood Quad
Baltimore County





MHP No. BA-2665

SHA Bldg No. 030 3400 US 40 / Little Gun power Falls

Bait G., MD

James Skock

2/6/09

MD SUPD

NW elev., facing SE

#1 of 6



MHP No. BA-2665

SMA Bridge No. 20303400, US 40/ Little Gumpowder Falls

Baltimore, MD

James Skoak

2/6/09

MD SRPO

Ext of SE parapet on WB bridge showing damaged & missing parapet + cracking + efflorescence on face, facing NW

#2 of 6



NIHP BA-2665

SHA BRIDGE NO 0303400, US 40 OVER LITTLE

BALTIMORE COUNTY, MD

GUNPOWDER FALLS

JAMES SKOCIK

2/6/69

MD SHPO

SOUTH EASTERN ELEVATION, FACING SOUTHWEST

3 of 6



MIHP BA - 2665

SHA BRIDGE NO. 0303400, US 40 OVER LITTLE
GUNPOWDER FALLS

BALTIMORE COUNTY, MD

JAMES SKOCIK 2/6/9

MD SHPO

SOUTHWEST WINGWALL & CONTINUOUS ABUTMENT,
SHOWING SPALLED CONCRETE CURB & FASCIA AND
CRACKED WINGWALL, FACING SOUTH.

#4 of 6



MIHP BA - 2665

SHA BRIDGE NO. 0303400, US 40 OVER LITTLE
GUNPOWDER FALLS

BALTIMORE COUNTY, MD

JAMES SKOLIK

MD SHPO 02/06/09

EXPOSED REBAR ON UNDERSIDE OF GIRDER,
FACING NORTHEAST (EASTBOUND BRIDGE)

A 5 of 6



NIHP BA-2665

SHA BRIDGE NO. G303400, US 40 OVER LITTLE
GUNPOWDER FALLS

BALTIMORE COUNTY, MD

JAMES SKOCIK

MD SHPO 02/06/09

AREA BETWEEN EASTBOUND & WESTBOUND BRIDGE,
FACING EAST

6 OF 6

Maryland Historical Trust

Maryland Inventory of Historic Properties number: BA-2665.

Name: #3034 / US40 over Little Gunpowder Falls

The bridge referenced herein was inventoried by the Maryland State Highway Administration as part of the Historic Bridge Inventory, and SHA provided the Trust with eligibility determinations in February 2001. The Trust accepted the Historic Bridge Inventory on April 3, 2001. The bridge received the following determination of eligibility.

MARYLAND HISTORICAL TRUST	
Eligibility Recommended <u> X </u>	Eligibility Not Recommended <u> </u>
Criteria: <u> A </u> <u> B </u> <u> C </u> <u> D </u> Considerations: <u> A </u> <u> B </u> <u> C </u> <u> D </u> <u> E </u> <u> F </u> <u> G </u> <u>None</u>	
Comments: _____ _____ _____	
Reviewer, OPS: <u> Anne E. Bruder </u>	Date: <u> 3 April 2001 </u>
Reviewer, NR Program: <u> Peter E. Kurtze </u>	Date: <u> 3 April 2001 </u>

gms

MARYLAND INVENTORY OF HISTORIC PROPERTIES
HISTORIC BRIDGE INVENTORY
MARYLAND STATE HIGHWAY ADMINISTRATION
MARYLAND HISTORICAL TRUST

MHT NO. BA-2665

NAME AND SHA NO.: 3034

LOCATION

Road Name and Number: US 40 over Little Gunpowder Falls

City/Town: Joppatowne vicinity

County: Baltimore/Harford

Ownership: ☒ State ☐ County ☐ Municipal ☐ Other

Bridge projects over: ☐ Road ☐ Railway ☒ Water ☐ Land

Is bridge located within designated district?: ☐ yes ☒ no
☐ NR listed district ☐ NR determined eligible district
☐ locally designated ☐ other
Name of District

BRIDGE TYPE

- ☐ Timber Bridge
☐ Beam Bridge ☐ Truss-Covered ☐ Trestle ☐ Timber-and-Concrete
- ☐ Stone Arch Bridge
- ☐ Metal Truss Bridge
- ☐ Moveable Bridge
☐ Swing ☐ Bascule Single Leaf ☐ Bascule Multiple Leaf
☐ Vertical Lift ☐ Retractable ☐ Pontoon
- ☐ Metal Girder
☐ Rolled Girder ☐ Rolled Girder Concrete Encased
☐ Plate Girder ☐ Plate Girder Concrete Encased
- ☐ Metal Suspension
- ☐ Metal Arch
- ☐ Metal Cantilever
- ☒ Concrete
☐ Concrete Arch ☐ Concrete Slab ☒ Concrete Beam ☐ Rigid Frame
☐ Other ☐ Type Name

DESCRIPTION

Describe the Setting:

Situated in part of Maryland's Tidewater physiographic zone, Bridge 3034 carries US 40 over Little Gunpowder Falls in southeastern Baltimore County. The road traverses the relatively level topography in a northeast-southwest fashion while Little Gunpowder Falls generally flows southerly. Although properties immediately surrounding the bridge feature woodland, nearby sections adjacent to US 40 possess mixed residential and commercial development primarily dating from the twentieth century. Little Gunpowder Falls forms the boundary between Baltimore and Harford counties.

**Describe the Superstructure and Substructure:
(Discuss points identified in Context Addendum, Section C)**

Bridge 3034 consists of twin, dual concrete-beam spans, each measuring 45-feet clear and carrying two traffic lanes on 30-foot clear roadways covered with two inches of bituminous wearing surface. W-beam guardrails have been attached to the interior surfaces of the balustrades facing the roadways. W-beams also protect the bridge approaches. In addition to concrete abutments and wing walls, a single concrete pier supports the twin bridge's superstructure.

Inspection records indicate the spans possess cracking, patching, spalling and surface erosion. The surfaces of the exterior girder display horizontal and longitudinal cracks. Interior girders exhibit patching throughout the spans, especially on the bottom surfaces and the bearing seats. Prior large spalled areas on the abutments have been patched although the abutments still exhibit surface spalling and erosion. The wing walls also possess light surface erosion with light random cracks. The balustrades feature large sections of exposed reinforcing bars where areas previously patched have broken-up and spalled off.

A survey of historic concrete beam bridges undertaken by the Maryland State Highway Administration in the Fall of 1995 identified 113 bridges of that type located throughout the state. Nearly one-quarter (26) of that total were double-span bridges; 37 bridges (33%) were multiple span.

Discuss major alterations:

Inspection records do not describe any major alterations undertaken on the bridge's fabric or placement.

MARYLAND INVENTORY OF HISTORIC PROPERTIES
HISTORIC BRIDGE INVENTORY
MARYLAND STATE HIGHWAY ADMINISTRATION
MARYLAND HISTORICAL TRUST

MHT NO. BA-2665

HISTORY

When Built: 1935

Why Built: Initial construction of New Philadelphia Road, now US 40.

Who Built: State Roads Commission

Who Designed: Unknown.

Why Altered: Not applicable.

Was this bridge built as part of an organized bridge building campaign?: Yes.

During the early 1930s, the State Roads Commission built a 30-mile, dual-lane divided highway linking Baltimore and Aberdeen. Designed to alleviate traffic congestion along the much-traveled Philadelphia Road (current MD 7) tracing much of the original, Colonial-era road between Baltimore and Philadelphia, the New Philadelphia Road became Maryland's principal new construction effort of the 1930s. Erected on an entirely new alignment bypassing established towns and railroad crossings, the New Philadelphia Road became known as the Pulaski Highway and now forms part of current US 40. Bridge 3034 formed part of the Baltimore-Aberdeen section of the New Philadelphia Road.

SURVEYOR ANALYSIS

This bridge may have NR significance for association with:

☒ A (Events) ☐ B (Person) ☒ C (Engineering/ Architectural Character)

Was this bridge constructed in response to significant events in Maryland or local history?

Erected in 1935, Bridge 3034 formed part of the New Philadelphia Road built in response to increased automobile use on state roads and the growing inadequacy of the original road system improved by the State Roads Commission (SRC) to handle larger traffic volumes. The SRC's major building effort during the 1930s, and one of the first on a new alignment designed to bypass towns and railroads slowing traffic movement, construction of the road marked a transition from the improvement of earlier roads and turnpikes characterizing the SRC's operations during the early twentieth century to an organization of highway and transportation planners.

When the bridge was built, and/or given a major alteration, did it have a significant impact on the growth and development of the area?

Construction of the New Philadelphia Road provided entry to previously less-accessible areas of southeastern Baltimore and Harford counties and had a significant impact on the area's subsequent development. Bridge 3034 participated in this general trend.

**MARYLAND INVENTORY OF HISTORIC PROPERTIES
HISTORIC BRIDGE INVENTORY
MARYLAND STATE HIGHWAY ADMINISTRATION
MARYLAND HISTORICAL TRUST**

MHT NO. BA-2665

Is the bridge located in an area which may be eligible for historic designation, and would the bridge add or detract from the historic and visual character of the possible district?

Bridge 3034 may contribute to a potential historic district encompassing resources related to development along US 40 after construction of the New Philadelphia Road.

Is the bridge a significant example of its type?

This bridge may survive as a good example of its type. As-built drawings indicate that this bridge utilized the State Roads Commission's 1933 standard specifications. Although many of the character defining elements are in a deteriorated state, the bridge is identifiable as an elaboration of those standard designs on a significant building project.

Does the bridge retain integrity of the important elements described in the Context Addendum?

This bridge possesses fair integrity of its character defining elements. Sections of many of the bridge's girders and balusters possess deep spalling with exposed reinforcing members. In addition, the abutments and wing walls display cracking and surface erosion. The installation of w-beam guardrails also detracts from the bridge's overall integrity.

Is the bridge a significant example of the work of the manufacturer, designer, and/or engineer, and why?

This structure may be a significant example of the State Roads Commission's bridge building. Utilizing and elaborating 1933 standard specifications, the State Roads Commission erected a bridge meeting the unique requirements of the project and location.

Should this bridge be given further study before significance analysis is made, and why?

Yes. Further study may indicate whether a linear historic district encompassing resources associated with the original construction of the New Philadelphia Road during the early 1930s and the surrounding area's subsequent development exist. Bridge 3034 may contribute to this potential historic district.

MARYLAND INVENTORY OF HISTORIC PROPERTIES
HISTORIC BRIDGE INVENTORY
MARYLAND STATE HIGHWAY ADMINISTRATION
MARYLAND HISTORICAL TRUST

MHT NO. BA-2665

BIBLIOGRAPHY

Maryland State Highway Administration

As-Built Drawings. On file at 707 North Calvert Street, Baltimore.

Bridge Inspection Reports. On file at 707 North Calvert Street, Baltimore.

Spero, P.A.C., & Company, and Louis Berger & Associates, Inc.

1994 *Historic Bridges in Maryland: Historic Context Report.* Maryland State Highway Administration, Baltimore.

State Roads Commission of Maryland

1934 *Report of the State Roads Commission of Maryland. Operating Report for the Years 1933 - 1934.* Baltimore.

1958 *A History of Road Building in Maryland.* Baltimore.

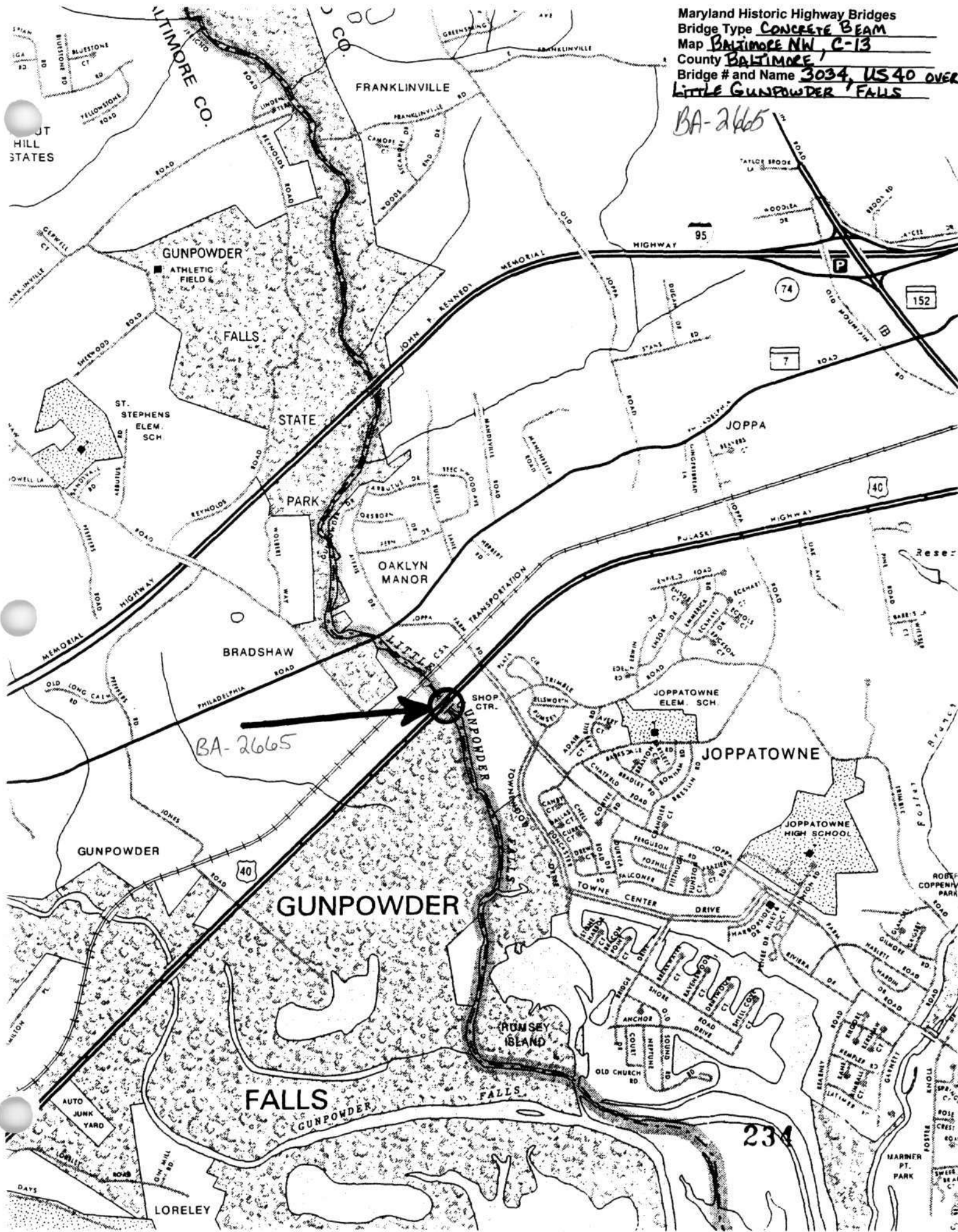
SURVEYOR INFORMATION

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Mechanicsburg, PA 17055

Date: 13 May 1996
Telephone: (717) 691-1340

Maryland Historic Highway Bridges
Bridge Type CONCRETE BEAM
Map BALTIMORE NW, C-13
County BALTIMORE
Bridge # and Name 3034, US 40 OVER
LITTLE GUNPOWDER FALLS

BA-2465





Inventory # BA-2665

Name 3034- US 40 OVER LITTLE GUNPOWDER FALLS

County/State BALTIMORE COUNTY / MD

Name of Photographer DAVE DIEHL

Date 1/95

Location of Negative SHA

Description NORTH APPROACH LOOKING
SOUTH

Number 132 of 365



Inventory # BA-2665

Name 3034- US 40 OVER LITTLE GUNPOWDER FALLS

County/State BALTIMORE COUNTY/MD

Name of Photographer DAVE DIEHL

Date 1/95

Location of Negative SHA

Description WEST ELEVATION LOOKING
SOUTHEAST

Number 23 of 365



Harford Co
Little
Gunpowder
River

Inventory # BA-2665

Name 3034-US 40 OVER LITTLE GUNPOWDER FALLS

County/State BALTIMORE COUNTY / MD

Name of Photographer DAVE DIEHL

Date 1/95

Location of Negative SHA

Description SOUTH APPROACH LOOKING
NORTH

Number 435 of 365



Inventory # BA-2665

Name 3034-US40 OVER LITTLE GUNPOWDER FALLS

County/State BALTIMORE COUNTY / MD

Name of Photographer DAVE DIEHL

Date 1/95

Location of Negative SHA

Description EAST ELEVATION LOOKING
NORTHWEST

Number ³34 of ⁵30

LITTLE GUNPOWDER FALLS BRIDGE

BUILT — 1934

STATE ROADS COMMISSION

G. CLINTON UHL — CHAIRMAN

E. BROOKE LEE — ROBERT LAGY

H. D. WILLIAR JR. — CHIEF ENGINEER

W. C. HOPKINS — BRIDGE ENGINEER

Inventory # BA-2665

Name 3034-US 40 OVER LITTLE GUNPOWDER FALLS

County/State BALTIMORE COUNTY/MD

Name of Photographer DAVE DIEHL

Date 1/95

Location of Negative SHQ

Description PLAQUE ON SOUTH END
OF MEDIAN PARAPET

Number 53 of 305